



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/791,845

03/04/2004

Tetsuo Yamaguchi

3673-0170P

5297

2292 7590 05/08/2007
BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

PASSANITI, SEBASTIANO

ART UNIT

PAPER NUMBER

3711

NOTIFICATION DATE

DELIVERY MODE

05/08/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/791,845

Applicant(s)

YAMAGUCHI ET AL.

Examiner

Sebastiano Passaniti

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on see detailed Office action.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-23 is/are pending in the application.
- 4a) Of the above claim(s) 5-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 02/28/2007.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date attached.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to communication received 02/28/2007 – IDS; 03/16/2007 – Request for Continued Examination (RCE), Request for Extension of Time, Amendment and Remarks.

Claims 1-4 have been canceled.

Claims 5-23 remain pending.

Claims 5-16 remain withdrawn from further consideration.

Following is an action on the MERITS:

Response to Arguments

In consideration of applicant's arguments, received 03/16/2007, the discussion with the applicant during the interview of April 27, 2006 and the further consideration of the arguments received 01/31/2007 after final rejection, the rejection of claims 17-20 under 35 USC §103 based upon the prior art reference to Zebelean (U.S. Patent No. 4,432,549) has been withdrawn. Of interest are the arguments presented by the applicant on page 5, line 20 through page 6, line 14 of the REMARKS, received 01/31/2007.

Applicant's attention is directed to the following new grounds of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi (JP 8280853) in view of Manning ('056). The patent to Satoshi discloses the applicant's invention substantially as claimed and includes a front ball striking wall part (11) that is thinned in a direction either towards the sole (Figure 1), towards the toe (Figure 3), towards the heel (Figure 4) or towards the crown (last two lines of translated abstract). These areas of thinning, with the exception of the thinning towards the crown, would appear to fall within the categories outlined by the applicant in claims 21, 22 and 23. Satoshi provides the face wall thinning to enhance the flexure of the face and to promote a rotation to the ball in a certain direction (see the translated abstract). Satoshi differs from the claimed invention in that Satoshi does not disclose the specific (x, y) coordinates for maximum resilience, as required by claims 17-20. Here, the claimed "maximum resilience point" has been likened to be similar in definition to the point of maximum coefficient of restitution, a phrase that is used more commonly in the golf art to describe that point on the striking face at which the a struck ball leaves the face with

Art Unit: 3711

the greatest ball speed. At the outset, several observations may be made about the claimed (x, y) coordinates and the value for maximum resiliency required by the claims. First, the "pendulum test" required by the claims is clearly not the only test that the skilled artisan would have had at his disposal at the time of the invention for locating the point of maximum resilience. In fact, *any* test that measures resilience that the skilled artisan would have employed, so long as the test was the same for point (0, 0) as well as points outside of (0, 0), would have provided the same results. The focus here is that the "value", or end product of the test, provides an indication of a greater resilience at a point outside of (0, 0). Thus, the mere fact that the applicant has required a "pendulum test" as part of the claims does not necessarily provide any added structure to the claimed golf club head. The fact that the applicant has established that the golf club should have a maximum resilience outside of (0, 0) may be indicative of a specific structure present in the club. Golf clubs have historically been designed to provide maximum repulsion when the face is struck at the sweet spot, with the sweet spot often being associated with the geometric face center (see U.S. Patent 5,451,056). In the instant case, the applicant has in essence moved the sweet spot to a location outside of the geometric face center. This relocation of the sweet spot may result from a number of factors, which the golf club maker would have been aware of at the time of the invention. For example, the thinning of the face away from (0, 0) to provide ball rotation in a specific direction, as detailed by Satoshi, would be characteristic of a club head having more resilience at points outside of the geometric center. Hence, Satoshi has moved the sweet spot of the striking face. Other common efforts in the golf industry

have focused on expanding the sweet spot such that the club face is more forgiving to off-center impacts. These efforts have included fashioning the crown portion to be more resilient so that the face is allowed to flex more in directions upwards of the geometric center. Modern day club heads, most notably hollow metal wood-type club heads, have been designed to have ball striking faces with a larger surface area. In essence, the sweet spot has been enlarged to include more than just the geometric face center (0, 0). Again, see U.S. Patent 5,541,056. Thus, to say, as required by the claims, that there exists a maximum resilience "point" may not necessarily be accurate. Clearly, there would appear to exist a region, however small, that encompasses a value of higher resilience on the face. Establishing a region of higher resilience on the face outside of (0, 0) would appear to be the general focus of the applicant's claimed invention. Locating the exact coordinates of this higher resilience region would appear to be something that the skilled artisan would have come across through routine experimentation. Therefore, the claimed requirements for the (x, y) coordinates set forth in claims 17-20 are not deemed critical. In view of the above argument, one of ordinary skill in the art would have found it obvious to locate the point of maximum resilience based upon routine experimentation.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Titleist Press Release (January 27, 2003) in view of Burnett ('508). The Titleist Press Release discloses the use of the model 983K titanium club head, but provides no further details about the construction of the head. The publication to Burnett, though published after the applicant's filing date, is nonetheless pertinent because it references the "prior art"

Art Unit: 3711

club. Labeled as the 983K and described in Figures 18 and 19 and paragraph [0044], particularly noting that the 983K has a maximum coefficient of restitution at a point that is 0.20 inch (5.08 mm) above the geometric face center. It is clear that applicant's requirement that the maximum resilience point be located at other than an (x, y) coordinate of (0, 0), yet within a specific range of "x" and "y" values, would be rendered obvious by a club head structure such as the 983K, wherein the maximum resilience point is just slightly above the geometric center. The comments with respect to the claimed pendulum test, the discussion of the coefficient of restitution and the arguments regarding the lack of criticality of the claimed (x, y) coordinates, as outlined in detail in the rejection of claims 17-23, supra, are being incorporated within this rejection of claim 17 and will not be repeated here, for brevity.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rugge ('160). It is clear that applicant's requirement that the maximum resilience point be located at other than an (x, y) coordinate of (0, 0), yet within a specific range of "x" and "y" values, would be rendered obvious by a club head structure such as the Rugge device, wherein the maximum resilience point is just slightly below the geometric center. Specifically, the Rugge club head has been designed to move the center of gravity just below the traditional face center by between about 0.5 to 4.0 mm below a horizontal plane containing the geometric face center. The comments with respect to the claimed pendulum test, the discussion of the coefficient of restitution and the arguments regarding the lack of criticality of the claimed (x, y) coordinates, as outlined

Art Unit: 3711

in detail in the rejection of claims 17-23, supra, are being incorporated within this rejection of claims 17 and 18 and will not be repeated here, for brevity.

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over a club head having a maximum resilience point at (x, y) equal to $(0, 0)$. In consideration of normal manufacturing tolerances evident during the production of hollow metal wood-type golf club head, it is clear that the point of maximum resilience may in fact be located at a location just minutely away from the geometric face center. For example, a club head having a maximum resilience point at $(0.001, 0.001)$ would effectively anticipate the applicant's claimed invention, as set forth in claim 17, with the exception of the specific details of the pendulum test. The comments with respect to the claimed pendulum test, the discussion of the coefficient of restitution and the arguments regarding the lack of criticality of the claimed (x, y) coordinates, as outlined in detail in the rejection of claims 17-23, supra, are being incorporated within this rejection of claims 17-20 and will not be repeated here, for brevity.

Further References of Interest

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See Figure 5 and column 2, line 64 through column 3, line 11 in Adams. Note column 2, line 6-0 through column 3, line 15 and Figure 1 in Shaw. Note Figure 1b in Bouquet. See Figure 1 in Gibbs. Note Figure 2 in Kohno. The publication to Chao and patent to Rice detail a COR, of interest. Iwata, Naruo and Kosmatka ('015 and '169) shows club faces with diverse thickness requirements. Patsky details multiple sweet spot locations. Junichi (JP 2002-136626) shows a high resilience region (4).

Art Unit: 3711


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 571-272-4413. The examiner can normally be reached on Monday through Friday (6:30AM - 3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene L. Kim can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S.Passaniti/sp
April 28, 2007


Sebastiano Passaniti
Primary Examiner